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TO: Steven Garland, Examiner

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FROM: Brian N. Tufte

RE: U.S. Patent Appln. No.: 10/726174
PROGRAMMABLE CONTROLLER WITH SAVING
CHANGES INDICATION
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COMMENTS: As we discussed, please find proposed claim amendments.
Please call me to discuss (612.359.9348). Thank you.

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<u>Proposed Claim Amendments For Discussion (8-15-06)</u>

** Claim amendments presented below assume the Amendment Filed 7-3-06 has not been entered.

1.   (currently amended) A method of modifying one or more parameters of a programmable HVAC controller, the HVAC controller having a user interface, the method comprising <u>the</u> steps of:

accepting a first input from a user via the user interface to modify at least one of the one or more parameters;

accepting a second input from the user via the user interface that indicates to the HVAC controller that parameter modification is complete;

after the second input is accepted, providing <u>to the user via the user interface</u> a visually perceptible <u>word or phrase</u> confirmation message to the user via the user interface that <u>explicitly</u> indicates <u>that</u> the <u>at least</u> one ~~or more~~ modified parameter[[s]] ~~have~~ <u>has</u> been, <u>is being</u> or will be saved; and

saving the at least one modified parameter.

Claim note: Merriam-Webster Dictionary on-line defines the word "explicit" as follows:

Main Entry: **ex·plic·it** 🔊
Pronunciation: ik-'spli-s&t
Function: *adjective*
Etymology: French or Medieval Latin; French *explicite,* from Medieval Latin *explicitus,* from Latin, past participle of *explicare*
1 a : <u>fully revealed or expressed without vagueness, implication, or ambiguity</u> : leaving no question as to meaning or intent <*explicit* instructions> **b** : open in the depiction of nudity or sexuality <*explicit* books and films>

(Emphasis Added). In Rite-Temp 8082 and in Smith (US Publication 2004/0245352 A1), any sort of "confirmation message" (e.g. blinking hold on HOME screen) would clearly not include a word or phrase that explicitly (e.g. fully reveals or expresses without vagueness, implication or ambiguity) that the new temperature setting has been, is being or will be saved. In fact, it would appear that the user would have to get the users manual out to know for sure what, for example,

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the "blinking" hold icon actually means. While the user may be able to deduce that the new temperature setting has been saved by noting that the new desired hold or away temperature is shown as the target temperature on the HOME screen, it cannot readily be argued that the blinking "hold" icon on the HOME screen includes a "word or phrase" that explicitly indicates (e.g. fully reveal or express without vagueness, implication or ambiguity) that the new desired temperature has been, is being or will be saved. As such, claim 1 is believed to be clearly patentable over the art of record.

2. (original) The method of claim 1, wherein the user interface comprises an alpha numeric display.

3. (original) The method of claim 1, wherein the user interface comprises a keypad.

4. (original) The method of claim 1, wherein the user interface comprises a touch screen.

5. (original) The method of claim 1, wherein the HVAC controller operates a heating schedule.

6. (original) The method of claim 1, wherein the HVAC controller operates a cooling schedule.

7. (original) The method of claim 1, wherein the HVAC controller operates a ventilating schedule.

8. (previously presented) The method of claim 1, further comprising an initial step of displaying a plurality of parameters and allowing the user to select one or more parameters for modification via the user interface.

9. (original) The method of claim 8, wherein displaying the plurality of parameters comprises displaying the parameters on an alpha numeric display.

10. (original) The method of claim 8, wherein the allowing step of allowing the user to select at least one of the parameters for modification comprises accepting an input via the user interface.

11. (original) The method of claim 8, wherein the allowing step of allowing the user to select at least one of the parameters for modification comprises accepting an input from a touch screen or a keypad.

12. (previously presented) The method of claim 1, wherein the accepting step of accepting a second input from the user includes the user touching a button of the user interface.

13. (previously presented) The method of claim 1, wherein the accepting step of accepting the first input from the user includes the user touching one or more buttons of the user interface in a sequence to modify at least one of the one or more parameters.

14. (original) The method of claim 1, wherein the one or more parameters comprises a temperature setpoint.

15. (original) The method of claim 1, wherein the one or more parameters comprises a humidity setpoint.

16. (original) The method of claim 1, wherein the one or more parameters comprises a time setting.

17. (original) The method of claim 16, wherein the time setting comprises a start time for one or more of a wake period, a leave period, a return period, or a sleep period.

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18.   (currently amended) The method of claim 1, wherein the one or more parameters comprises a ~~date~~ day setting.

19.   (original) The method of claim 1, wherein at least selected ones of the one or more parameters comprises in combination a time setting and a temperature setting.

20.   (original) The method of claim 1, wherein at least selected ones of the one or more parameters comprises in combination a time setting and a fan setting.

21.   (original) The method of claim 1, wherein at least selected ones of the one or more parameters comprises in combination a time setting and an equipment selection setting.

22.   (previously presented) The method of claim 1, wherein at least selected ones of the parameters comprise in combination a time setting and an equipment on/off setting.

23.   (currently amended) The method of claim 1, wherein the providing step of providing the visually perceptible word or phrase ~~confirmation message~~ to the user via the user interface that the at least one ~~or more~~ modified parameter[[s]] ~~have~~ has been, is being, or will be saved comprises providing the visually perceptible word or phrase ~~confirmation message~~ before saving the at least one ~~or more~~ modified parameter[[s]].

24.   (currently amended) The method of claim 1, wherein the providing step of providing the visually perceptible word or phrase ~~confirmation message~~ to the user via the user interface that the at least one ~~or more~~ modified parameter[[s]] ~~have~~ has been, is being, or will be saved comprises providing the visually perceptible word or phrase ~~confirmation message~~ after saving the at least one ~~or more~~ modified parameter[[s]].

25.   (currently amended) The method of claim 1, wherein the providing step of

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providing the visually perceptible word or phrase confirmation message to the user via the user interface that the at least one or more modified parameter[[s]] have has been, is being, or will be saved comprises providing the visually perceptible word or phrase confirmation message simultaneously with saving the at least one or more modified parameter[[s]].

26. (cancel)

27. (previously presented) The method of claim 1, wherein the visually perceptible word or phrase confirmation message comprises a text message on an alpha numeric display or a touch screen.

28. (previously presented) The method of claim 1, wherein the visually perceptible word or phrase confirmation message comprises a graphical message or icon on a graphical display.

29. (cancel)

30. (currently amended) The method of claim 1, wherein the providing step of providing the visually perceptible word or phrase confirmation message to the user via the user interface that the one or more modified parameters have has been, is being, or will be saved comprises displaying in combination the word or phrase a confirmatory message and at least one of the modified parameters.

31. (currently amended) The method of claim 30, wherein at least one of the modified parameters is a time setting that is displayed in combination with the word or phrase confirmatory message.

32. (currently amended) The method of claim 30, wherein at least one of the modified parameters is a day setting that is displayed in combination with the word or phrase

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~~confirmatory message.~~

33.   (currently amended) An HVAC controller comprising one or more control parameters, a memory and a user interface, wherein the one or more control parameters includes one or more programmable time settings, the HVAC controller configured to:

accept a first input from a user via the user interface to modify ~~one or more of the control parameters~~ at least one of the one or more programmable time settings of the HVAC controller;

accept a second input from the user via the user interface that indicates to the HVAC controller that parameter modification is complete;

after the HVAC controller accepts the second input, provide a visually perceptible confirmation message to the user via the user interface that indicates the one or more modified control parameters ~~has have~~ been, is being, or will be saved ~~after the HVAC controller accepts the second input~~; and

save the modified one or more control parameter of the HVAC controller to the memory.

34.   (original) The HVAC controller of claim 33, wherein the interface comprises at least one of an alpha numeric display, a touch screen and a keypad.

35.   (original) The HVAC controller of claim 33, wherein the interface comprises at least one of a graphical display, a touch screen and a keypad.

36.   (original) The HVAC controller of claim 33, wherein the HVAC controller comprises a thermostat.

37.   (currently amended) The HVAC controller of claim 33, further configured to display a plurality of control parameters and to permit the user, via the interface, to select a parameter for modification.

38.   (previously presented) The HVAC controller of claim 33, wherein the HVAC

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controller accepts the first input from a keypad or touch screen to allow the user to modify the one or more of the control parameters of the HVAC controller.

39.   (previously presented) The HVAC controller of claim 33, wherein the user interface of the HVAC controller includes a button that is touched by the user to accept the second input to indicate to the HVAC controller that parameter modification is complete.

40.   (previously presented) The HVAC controller of claim 33, wherein the one or more control parameters comprises a temperature setpoint.

41.   (previously presented) The HVAC controller of claim 33, wherein the one or more control parameters comprises a humidity setpoint.

42.   (previously presented) The HVAC controller of claim 33, wherein the one or more control parameters comprises in combination a time setting and a temperature setting.

43.   (previously presented) The HVAC controller of claim 33, wherein the one or more control parameters comprises in combination a time setting and a fan setting.

44.   (previously presented) The HVAC controller of claim 33, wherein the one or more control parameters comprises in combination a time setting and a humidity setting.

45.   (previously presented) The HVAC controller of claim 33, wherein the one or more control parameters comprises in combination a time setting and an equipment selection setting.

46.   (previously presented) The HVAC controller of claim 33, wherein the one or more control parameters comprises in combination a time setting and an equipment on/off setting.

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47.　(cancel)

48.　(previously presented) The HVAC controller of claim 33, wherein the visual perceptible confirmation message comprises a text message on an alpha numeric display or a touch screen.

49.　(currently amended) The HVAC controller of claim 33 [[47]], wherein the ~~visual confirmation~~ visually perceptible confirmation message comprises a graphical message or icon on a graphical display.

50.　(cancel)

51.　(currently amended) The HVAC controller of claim 33, wherein the visually perceptible confirmation message provided to the user that indicates that the one or more modified parameters has ~~have~~ been, is being, or will be saved includes in combination a confirmatory message and at least some of the one or more modified parameters.

52.　(cancel) The HVAC controller of claim 33 [[51]], wherein the visually perceptible confirmation message provided to the user that indicates that the one or more modified parameters has ~~have~~ been, is being, or will be saved includes in combination a confirmation message as well as a day or days of a week setting that correspond to the one or more modified parameters.

53.　(currently amended) A programmable controller for controlling a system, the programmable controller having a programmable schedule with one or more programmable schedule parameters, the programmable controller having a first mode wherein the programmable controller controls the system in accordance with the programmable schedule parameters and a second mode wherein the programmable controller controls the system not in

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accordance with the programmable schedule parameters, the programmable schedule further having a programmable schedule editing mode for editing one or more of the programmable schedule parameters and a manual editing mode for editing one or more manual parameters, the programmable controller comprising:

display means configured to display a ~~plurality~~ one or more of the programmable schedule parameters while the programmable controller is in the programmable schedule editing mode;

receiving means for receiving from a user a selection of one or more of the programmable schedule parameters that are to be edited while the programmable controller is in the programmable schedule editing mode;

setting means for receiving from the user a new setting for at least one of the selected programmable schedule parameters while the programmable controller is in the programmable schedule editing mode;

completion means for receiving an input from the user via the user interface that indicates to the ~~HVAC~~ programmable controller that editing is complete while the programmable controller is in the programmable schedule editing mode; and

informing means for informing the user via a ~~separate~~ confirmation message on the display means that the new setting(s) has~~/have~~ been, is being, or will be saved.

54.   (previously presented) The programmable controller of claim 53, wherein the display means comprises an alpha numeric capable display.

55.   (previously presented) The programmable controller of claim 53, wherein the display means comprises a graphical display.

56.   (previously presented) The programmable controller of claim 53, wherein the receiving means and the setting means comprise one or more regions of a touch screen, and the completion means comprises a different region of the touch screen.

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57. (previously presented) The programmable controller of claim 53, wherein the display means comprises an alpha numeric display, and the informing means comprises a message displayed on the alpha numeric display.

58. (previously presented) The programmable controller of claim 53, wherein the display means comprises a graphical display, and the informing means comprises a message displayed on the graphical display.

59. (previously presented) The programmable controller of claim 53, wherein the informing means comprises an aural message.

60. (currently amended) A method of modifying one or more parameters of a programmable HVAC controller schedule, the HVAC controller having a user interface that includes a display, the method comprising the steps of:

displaying one or more parameters on the display;

allowing a user to modify at least one of the one or more parameters via the user interface;

displaying at least one of the one or more modified parameters on the display;

saving the at least one modified parameter; and

providing a confirmation message on the display that notifies the user that the one or more modified parameters has have been, is being, or will be saved, and also displaying in combination with the confirmation message, at least one day of a week of the HVAC controller schedule that corresponds to the at least one modified parameter the confirmation message being different from merely displaying the one or more modified parameters on the display.

61. (previously presented) The method of claim 60 further comprising the step of allowing a user to indicate via the user interface that parameter modification is complete prior to providing the confirmation message.

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62.   (previously presented)The method of claim 60, wherein the confirmation message includes the message "Saving Changes".

63.   (previously presented)The method of claim 60 wherein the confirmation message is provided at the same time that the one or more modified parameters are displayed.

64.   (previously presented) The method of claim 60 wherein at least one of the one or more modified parameters are not displayed at the same time as the confirmation message.

65.   (previously presented) The method of claim 64 wherein none of the one or more modified parameters are displayed at the same time as the confirmation message.

66.   (previously presented)The method of claim 60 wherein the confirmation message is provided on the display for at least one second.

67.   (previously presented)The method of claim 66 wherein the confirmation message is provided on the display for at least five seconds.

68.   (currently amended) The method of claim 60 wherein the confirmation message includes one or more words displayed on the display that conveys to the user that the one or more modified parameters has have been, is being, or will be saved.

69.   (currently amended)   The method of claim 60 wherein the confirmation message includes one or more icons displayed on the display that conveys to the user that the one or more modified parameters has have been, is being, or will be saved.

70.   (currently amended) A method of modifying one or more parameters of a programmable HVAC controller schedule, the HVAC controller having a user interface, the method comprising the steps of:

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accepting one or more parameter changing inputs from a user via the user interface to modify at least one of the one or more parameters;

after each parameter changing inputs is accepted, not providing an indication to the user via the user interface that indicates the one or more modified parameters have been or will be saved;

accepting a parameter modification complete input from the user via the user interface that indicates to the HVAC controller that parameter modification is complete; and

after the parameter modification complete input is accepted, providing an indication to the user via the user interface that indicates the one or more modified parameters has ~~have~~ been, is being, or will be saved, and also indicating in combination with the confirmation message, at least one day of a week of the HVAC controller schedule that corresponds to at least one modified parameter.

71.   (New) The method of claim 70 wherein the confirmation message is displayed on a display of the user interface, and the at least one day of the week that corresponds to the at least one modified parameter is also displayed on the display.

72.   (New) The method of claim 71 wherein, when the confirmation message is displayed on a display, only the confirmation message and the at least one day of the week that corresponds to the at least one modified parameter are displayed on the display.